transition probabilities for gabapentin were calculated from published literature listing gabapentin-refractory NeP patients that respond to pregabalin. **RESULTS:** Both pregabalin and gabapentin were more effective and less costly compared to the placebo treatment. The quality-adjusted life years (QALYs) for SCI patients with NeP in the placebo, gabapentin and pregabalin groups were 0.49, 0.533, and 0.543, respectively. The incremental cost effectiveness ratio (ICER) for pregabalin versus gabapentin was $104,108 (US$, 2012). The model suggests that a modest change (5% reduction) in indirect costs with pregabalin treatment reduces the ICER to $31,096. One-way sensitivity analyses show that the model is most sensitive to pregabalin's efficacy at alleviating NeP in gabapentin-refractory SCI patients, and utility scores for the four NeP-severity health states in SCI patients. The model also shows that changes in the direct and indirect costs associated with the four health states are inconsequential. **CONCLUSIONS:** Pregabalin is cost-effective as a first-line treatment for SCI-associated NeP in the United States provided that there is a pregabalin treatment-specific reduction in indirect costs.

PSY31

COST-EFFECTIVENESS OF LIVER TRANSPLANTATION IN METHYLMALONIC AND PROPIONIC ACIDEMIAS

Li M[1], Veenstra DL[1], Dick AA[2], Montenovo MI[3], Horslen SP[4], Hansen RN[1]
[1]*School of Pharmacy, University of Washington, Seattle, WA, USA,* [2]*Seattle Children's Hospital, Seattle, WA,* [3]*University of Washington, Seattle, WA,* [4]*Departments of Gastroenterology, Hepatology, and Transplantation, Seattle Children's Hospital, Seattle, WA, USA*

OBJECTIVES: Methylmalonic academia (MMA) and propionic academia (PA) are rare inborn errors of metabolism that cause significant morbidity and are associated with early mortality among patients. The mainstay of the long-term medical management relies on a lifelong protein-restricted and high-energy diet. Liver transplantation is a relatively infrequently used alternative therapy that corrects the metabolic errors and potentially improves survival and quality of life. The objective of this study is to estimate the incremental clinical and economic outcomes associated with liver transplantation vs. nutritional support among patients with MMA and PA. **METHODS:** We constructed a three health state Markov model using data derived from the United Network for Organ Sharing (UNOS) database, meta-analyses, cohort studies, narrative reviews, and expert opinions when necessary. Societal and payer perspectives were considered. Lifetime direct and indirect costs, life expectancies, and quality-adjusted life-years (QALYs) were estimated based on one-year model cycles for hypothetical cohorts of newborns with MMA and PA, respectively. We conducted a series of one-way sensitivity analyses to assess the impact of parameter assumptions on the result. Scenario analyses were performed, including a worst-case scenario setting all parameters to favor nutritional support. **RESULTS:** In the base case analysis liver transplantation was the dominant strategy, saving $1,594,995 in lifetime societal costs and generating 8 more QALYs compared to nutritional support. Liver transplantation remained dominant from the payer perspective, saving $1,171,978 throughout lifetime. In one-way sensitivity analyses we found that discount rate and annual mortality rates are the most influential parameters on costs and QALYs respectively. In the worse-case scenario, liver transplantation still produced lower costs but lower QALYs (-12.1) compared to the nutritional support group. **CONCLUSIONS:** Liver transplantation appears to be a cost-effective treatment alternative compared to nutritional support in MMA and PA patients. Future research is needed on the long-term survival and quality of life in these patient populations.

PSY32

COST-MINIMIZATION ANALYSIS OF ANTI-TNF BIOLOGICS IN THE TREATMENT OF RHEUMATOID ARTHRITIS, ANKYLOSING SPONDYLITIS AND PSORIATIC ARTHRITIS UNDER THE BRAZILIAN PRIVATE HEALTH CARE SYSTEM PERSPECTIVE

Scaccabarozzi L
Janssen, São Paulo, Brazil

OBJECTIVES: To compare the treatment cost of anti-TNF biologics indicated simultaneously for the treatment of rheumatoid arthritis (RA), ankylosing spondylitis (AS) and psoriatic arthritis (PsA) under the Brazilian private health care system perspective. **METHODS:** In Brazil, four anti-TNF biologics are approved for the treatment of RA, AS and PsA: adalimumab (ADA), etanercept (ETA), infliximab (IFX), and golimumab (GOL). Published literature shows no difference in safety and efficacy among them; therefore, a cost-minimization analysis was performed as presented by Morais AD et al at ISPOR 18th Annual Meeting. Yearly treatment costs were calculated for an average patient of 70 kg, according to dose and dosing intervals defined in products label. Prices were gathered from the official price list. Since IFX dose is weight-dependent, deterministic sensitivity analysis (DSA) was conducted to determine the impact of this parameter on results. **RESULTS:** GOL has the lowest cost of treatment across the biologics in all indications, at R$41,555 per patient per year. GOL treatment cost remains unchanged across indications or years of treatment, as loading dose is not required. For RA treatment, IFX has the second lowest cost of treatment at R$60,720/patient/year. For AS and PsA treatments, due to higher dosing of IFX, the average cost per patient is R$80,960, similar to the cost with ADA and 8.8% above ETA. Using DSA, cost of treatment with IFX for AS and PsA can reach up to R$101,199, assuming a patient weight of 100 kg. **CONCLUSIONS:** Treatment with GOL compared to the other anti-TNFs may bring important savings to the private payers (HMOs), not only in RA, but also in AS and PsA, with potential to reduce the cost of treatment by 48.7%, and so allowing a higher number of patients to be treated at same budget level.

PSY33

HEALTH ECONOMIC EVALUATION OF FERRIC CARBOXYMALTOSE (FERINJECT®) IN PATIENTS WITH IRON DEFICIENCY ANEMIA

Zakin L[1], Asbun-Bojalil J[2], Chiu-Ugalde J[2], Wernli J[3], Cirrincione A[3]
[1]*Vifor Pharma Latin America, Buenos Aires, Argentina,* [2]*Medical Research Department,Takeda-Mexico, Naucalpan, Mexico,* [3]*Vifor Pharma International, Zurich, Switzerland*

OBJECTIVES: In Mexico, iron deficiency anemia (IDA) is frequent and varies according to age: children between 0 and 5 years: 23.7%, women between 15 and 44.99 years: 15.6%, pregnant women 20.6%. Intravenous iron (IV) is a treatment option for IDA when patients are intolerant to oral iron or there is a need to replenish iron stores. The objective of this study was to estimate the relative direct health care costs of ferric carboxymaltose (FCM), IV iron dextran (ID), and red-blood cells (RBC) transfusions for patients with IDA in Mexican private hospitals. The assessment has been made from the third party payer perspective represented by health insurances across multiple therapeutic areas (TA) (gastroenterology, gynecology, and surgery). **METHODS:** A cost-minimization analysis assuming similar efficacy and safety of the alternatives was conducted since the evidence of IV ID is limited in the selected TAs limiting our ability for indirect comparisons. Mean IV iron dose needed to correct IDA is estimated to be 1000 mg per patient and IV infusion time required is based on the Mexican SmPc for both products (FCM 15 minutes versus ID 6 hours). Mean cost of infusions was calculated based on daily hospitalization costs according to national tariffs (according to 5 private health care institutions). Cost savings due to IV iron-induced reduction of RBC transfusion before hip and knee surgery are based on published evidence (Kotze et al). **RESULTS:** In all the TAs, the use of FCM compared to ID regarding infusion efficiency derived from reduced hospitalization time and IV iron-induced reduction of RBC transfusions resulted in substantial cost savings. Independently of the TA, mean costs savings per patient were $6980 Mexican pesos. **CONCLUSIONS:** This study showed that the utilization of FCM could reduce costs to the health insurances at private hospitals due to improved administration efficiency and reduction in RBC transfusions.

PSY34

COST-MINIMIZATION ANALYSIS OF ANTI-TNF BIOLOGICS IN THE TREATMENT OF RHEUMATOID ARTHRITIS, ANKYLOSING SPONDYLITIS AND PSORIATIC ARTHRITIS UNDER THE BRAZILIAN PUBLIC HEALTH CARE SYSTEM (SUS) PERSPECTIVE

Scaccabarozzi L
Janssen, São Paulo, Brazil

OBJECTIVES: To compare the treatment cost of anti-TNF biologics indicated simultaneously for the treatment of rheumatoid arthritis (RA), ankylosing spondylitis (AS) and psoriatic arthritis (PsA) under the Brazilian public health care system (SUS) perspective. **METHODS:** In Brazil, four anti-TNF biologics are approved for the treatment of RA, AS and PsA: adalimumab (ADA), etanercept (ETA), infliximab (IFX), and golimumab (GOL). Published literature shows no difference in safety and efficacy among them; therefore, a cost-minimization analysis was performed as presented by Morais AD et al at ISPOR 18th Annual Meeting. Yearly treatment costs were calculated for an average patient of 70 kg, according to dose and dosing intervals defined in products label. Prices were gathered from an official government website, as the four biologics are already reimbursed by SUS: ADA, ETA and IFX for the three indications, and GOL for RA only. Since IFX dose is weight-dependent, deterministic sensitivity analysis (DSA) was conducted to determine the impact of this parameter on results. **RESULTS:** GOL has the lowest cost of treatment across the biologics in all indications, at R$17,703 per patient per year. GOL treatment cost remains unchanged across indications or years of treatment, as loading dose is not required. For RA treatment, IFX has the second lowest cost of treatment at R$18,313/patient/year. For AS and PsA treatments, due to higher dosing of IFX, the average cost per patient is R$24,418, similar to the cost with ADA and ETA. Using DSA, cost of treatment with IFX for AS and PsA can reach up to R$30,522, assuming a patient weight of 100 kg. **CONCLUSIONS:** With the lowest cost of treatment, GOL is already available in SUS for RA treatment, and represents an important treatment option for patients with AS and PsA as well, with potential to reduce the cost of treatment by 27.5%.

PSY35

BORTEZOMIB-BASED REGIMENS USED AS INDUCTION IN NEWLY DIAGNOSED MULTIPLE MYELOMA (NDMM) PATIENTS ELIGIBLE FOR STEM CELL TRANSPLANTATION (SCT)THE COST-UTILITY ANALYSIS

Mucha J[1], Walczak J[1], Tronczynski K[2], Skrzekowska-Baran I[2]
[1]*Arcana Institute, Krakow, Poland,* [2]*Janssen-Cilag Polska, Warszawa, Poland*

OBJECTIVES: To perform cost-utility analysis (CUA) of bortezomib in combination with dexamethasone (VD) or thalidomide and dexamethasone (VTD) used as induction treatments in ndMM patients eligible for SCT in Poland. **METHODS:** The Markov model was developed in Microsoft Excel and programmed in Visual Basic for Applications. The lifetime horizon and National Health Fund (NHF) perspective were taken into account. Five health states were considered: 1st line intensive treatment (i.e. induction, stem cell harvest, high dose chemotherapy and SCT), 2nd, 3rd, further lines of treatment and death. Since CTD regimen (cyclophosphamide + thalidomide + dexamethasone) is recommended by Polish clinical guidelines as the most appropriate treatment in ndMM patients, both VD and VTD were compared to CTD. Moreover, VD and VTD were compared to VAD (vincristine + doxorubicine + dexamethasone) and TD (thalidomide + dexamethasone) regimens, respectively. Data on clinical effectiveness regarding induction treatment were retrieved from three RCTs: IFM 2005-01 (VD vs VAD), PETHEMA (VTD vs TD) and Morgan 2012 (arm for CTD only). Data on 2nd, 3rd and further treatment lines came from APEX and eVOBS studies and utilities from Van Agthoven 2004. Following Polish costs were considered: chemotherapy, drugs administration, monitoring, maintenance therapy, transplant related treatment, palliative care and adverse events. The measure of effectiveness were quality adjusted life years (QALY). Discount rates of 5% for costs and 3.5% for benefits were used. **RESULTS:** When compared to the main comparator CTD, bortezomib-based regimens are cost-effective therapies. Results from NHF perspective are $31,576/QALY and $14,023/QALY, for VD and VTD respectively. The ICER for comparisons VD vs VAD and VTD vs TD are $25,302/QALY and $24,751/QALY. Obtained results are placed below the acceptability threshold in Poland ($35,278/QALY). **CONCLUSIONS:** Induction treatment of ndMM with bortezomib-based regimens are cost-effective strategies in comparison with other available therapies in Poland.